

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Unlicensed Operation in the Band 3650 – 3700 MHz	)	ET Docket No. 04-151
	)	
Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band	)	ET Docket No. 02-380
	)	
Amendment of the Commission’s Rules With Regard to the 3650-3700 MHz Government Transfer Band	)	ET Docket No. 98-237
	)	

**COMMENTS OF PART-15.ORG**

The PART-15 Organization (PART-15.ORG), by its membership and pursuant to the Commission’s *Public Notice* released April 23, 2004, hereby submits its comments in response to the Commission’s Notice of Proposed Rule Making.

As the Commission is aware, the PART-15.ORG is a worldwide organization of Wireless Internet Service Providers (“WISPs”) and equipment vendors who provide technical support and training in the provisioning of broadband service via license-exempt spectrum in the 902-928 MHz, 2.4 GHz and 5 GHz bands. The PART-15.ORG voices our regulatory concerns via the License Exempt Alliance (LEA) who are also active in a number of Commission proceedings that directly or indirectly pertain to the license-exempt industry. The PART-15.ORG fully indorses and supports the LEA filing on this matter and submits on our own behalf the following.

Because there is no regulatory requirement for identification – we “believe” there are approximately 8000 small WISPs nationwide. We further believe that by the end of this year, more than 1 Million customers will be served by the small WISPs use of the unlicensed spectrums.

As our organization is comprised largely of members using the license-exempt spectrums, we will limit our response to those issues associated with the unlicensed use of the 3650-3700 bands only.

PART-15.ORG concurs with the Commissions initial conclusion that permitting unlicensed operation in the 3650 MHz band would foster the introduction of new and advanced services to the American public, especially in rural areas. As previously illustrated by this organization on many occasions, it is the licensed exempt WISP that is providing the majority of broadband connectivity to rural America.

The 3650-3700 MHZ band is particularly well suited to respond to the needs of today's License Exempt WISP. Again, we reiterate the implicitly of how license exempt WISPs are providing the services to rural America where little or no attention from larger broadband providers have deployed. This band appears particularly well suited to respond to the needs entrepreneurial wireless internet service providers (WISPs) who are today bringing broadband services to consumers in rural areas of the United States who have few or no other choices for such services than consumers in more populated areas.

The WISPs use of this additional spectrum for unlicensed uses will provide both backhaul service opportunities and broadband service directly to their customers. The incumbents -- FSS earth stations that are limited to international intercontinental traffic -- are concentrated primarily on the coasts, leaving available the rural areas targeted by these providers. In addition, unlicensed use in this band would complement existing unlicensed operations in the 2.4 GHz band and 5 GHz band by enabling an "uncongested" band segment.

This organization supports Navini and other commentary who point out in their comments the un-licensing the 3650 MHZ band will attract the most competition and diversity of service offerings. However, none of their other points bare any merit by the Commission. PART-15.ORG rejects Navini's additional commentary as ill-advised and poorly enlightened on the License Exempt Wireless Internet Service Providers Industry.

Navini and others point out that the benefits of offering the 3650 MHZ band to the unlicensed bands will come at a cost. It is this organizations belief the only cost to be noted is the cost of CPE being lowered due to market demands and fair competition. The Commission must not allow the unlicensed use of the 3650 MHZ band to become a commodity to be plagiarized by the licensed manufacturers.

Some commentor's may point out that there will be no frequency coordination in the proposed unlicensed 3650 MHZ band. License Exempt WISPs have known this issue since the beginning of wide spread deployments almost ten years ago. It is a decision each and every license exempt WISP undertakes when he/she decides to become a License Exempt WISP. It is a basic fundamental of our industry and nothing new. License Exempt WISPs have never sought licensed protection from interference. "Interference must be tolerated". Of course interference must be tolerated. It's License Exempt.

Some may comment on the high cost associated with deploying license exempt 3650 MHZ equipment. As we pointed out earlier in this response, market demands and fair competition always have the end result of lower pricing. I personally remember paying \$167 from a limited number of vendors available at the time for an 802.11b radio (in 1997) that now can be purchased for \$39 at the local technology store. It is a simple matter of economics, that competition brings prices lower.

Some may comment that receiver selectivity and antenna directivity remain the strongest tools for interference avoidance, and that these tools are most effective in a licensed arena.

However, those that make such statements fail to support their claims with fact or real world data. On the other hand, this organization supports “some” of their position in that receiver selectivity and antenna directivity are very strong tools for interference avoidance and PART-15.ORG proposes that the license exempt WISPs are believed to be more astute to interference avoidance than many licensed users simply because the License Exempt WISPs must deal with interference issues as a routine business concern.

The Commission proposes that Geographical limitations would be an acceptable control to limit interference issues with FSS earth stations. This organization fully supports this Commission proposal.

As the Commission notes, permitting unlicensed use of the 3650-3700 MHZ bands will address many of the issues the license exempt WISP must deal with on a daily basis. Furthermore, license exempt WISPs are somewhat stifled without the additional 3650-3700 bands as the noise floor in the currently used bands continue to rise.

Permitting the use of the 3650-3700 MHZ will also provide an additional device to provide much needed Voice Over IP technologies that are currently hampered in many areas due to RF congestion in other license exempt bands. In fact, this additional spectrum will foster the growth of technological advances such as VoIP in areas that still do not have digital phone services and require old fashion rotary telephones.

PART-15.ORG endorses the Commission first approach, which would apply to fixed unlicensed devices, requiring professional installation of each device to ensure that certain criteria are met so that operation at a particular location and power would not result in interference to any FSS earth station. The Commissions second approach, (also endorsed by this Organization) which would apply to non-fixed unlicensed devices, requires such devices to be capable of automatically adjusting the EIRP based upon detection of the presence and strength of

RF transmissions from operating FSS earth stations. This approach is already in use by the licensed exempt WISP in the 5 GHz spectrum.

With slight reservation as to how to accomplish the identification, this Organization endorses the Commission's proposal that both fixed and non-fixed unlicensed devices be required to transmit a device identification signal to facilitate determining the source of any interference that might be caused by the operation of these devices.

The frequency and means of such an informational transmission is questionable to ensure proper maintenance for security purposes. An alternative approach would be the user database as proposed by the Commission which includes FCC ID number and transmitter serial number matched to operator information located in the database. We suggest the Commission require registration prior to use.

PART-15.ORG strongly encourages the Commission's proposal for mandatory Professional Installation to ensure that fixed unlicensed devices operating in the 3650-3700 MHz bands are established and operated in a manner that will avoid causing interference to FSS earth stations.

PART-15.ORG recommends the Commission consider completion of an industry-based certification program as sufficient means of identification of professionalism and the Commission should not participate in regulating industry standards. The professional installer would be held responsible to account for the presence of all FSS earth stations and Federal Government operations in the vicinity of the unlicensed device.

Additionally, Professional Installer Certification databases, such as those at PART-15.ORG can be made readily available and open to the public, much like the databases currently used by the Commission for HAM radio operators.

The Commission's International Bureau Filing System (IBFS) database of satellites and associated earth stations is available on the FCC's website in much the same availability as the

Commissions License Exempt Certified Systems database. PART-15.ORG's Professional Certification course makes it mandatory for applicants to display a working knowledge on the use of the Commission's Certified Systems Database to ensure proper compliance with FCC Rule 15. Therefore, adding the additional requirement of a working knowledge of the IBFS database could be easily accomplished by all testing firms.

PART-15.ORG encourages the Commissions proposal to permit a maximum EIRP of 25 Watts (14 dBW) in the 3650-3700 MHz and the use any combination of transmitter output power/antenna. We concur with the Commissions findings that this approach will more directly reflect the potential for interference. We suggest to the Commission that compliance to this requirement can be measured in numerous ways, e.g. authorized radio/antenna database.

We concur with the Commissions finding that an unlicensed device located outside the earth station's main beam could operate with relatively higher power and at closer separation distances without causing interference and support the Commissions proposal for defined protection zones around each FSS earth station.

PART-15.ORG supports the Commission's proposal to provide sufficient protection to Canadian and Mexican stations operating in the 3650-3700 MHz band that are located near the U.S. borders, in requiring fixed devices be located at least 8 kilometers from the U.S./Canada or U.S./Mexico border if the antenna of the device looks within the 160° sector away from the border and be located at least 56 kilometers from each border if the device looks within the 200° sector towards the border.

Alternative #1 - P15 recommends the Commission take a "controlled approach" to the unlicensed use of the 3650-3700 MHz bands. Site by site registration of license exempt. A simple \$10 registration fee per site. We recommend to the Commission to not limit ourselves to past or outdated approaches. For years it has been licensed and unlicensed. PART-15.ORG proposes a new approach which adds a third opportunity: Licensed, Moderated, and Unlicensed.

We prefer a “moderated” use of 3650-3700 MHZ. Not licensed, but more of a registered use on an area-by-area (or site-by-site) allocation. This could be the test-bed for the future of unlicensed wireless. PART-15.ORG would support a registration of “site-by-site” or better yet, a geographic area registration. Competitive bidding (as allowed under licensed use) should not be allowed. First come, first served registrations with use or lose clause could be easily established.

In conclusion, these proposals would facilitate the rapid deployment of advanced telecommunications services and technologies to all Americans, especially in rural areas of the United States, thus promoting the Presidents and the Commissions objectives.

Respectfully Submitted

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